

Understanding Landscape change and Public perceptions of Surface mining on local economy, environment and human well-being in Eastern Kentucky

Panel Participants: Buddhi Gyawali, Oguz Sariyildiz, Tilak Shrestha, Prabisha Shrestha, Jeremy Sandifer, College of Agriculture Food Science and Sustainable Systems, Kentucky State University, Frankfort Kentucky

This presentation summarizes preliminary results of the land cover change, land fragmentation, use of unmanned aerial systems data for effective land use and management, environment and micro climate variation, and public perceptions on overall impacts of coal-mine and reclamation efforts in the local economy in the seven counties in Eastern Kentucky. Kentucky State University (KSU) has been conducting research since 2015 to study the impacts of natural resources extraction on environment and rural communities, as well as for advancing the body of knowledge and data extraction technology in environmental change. The results of this study are being utilized for the expansion of extension program in new counties, creation of databanks of satellite imageries, LiDAR, UAVs, and Extension curriculum for precision agriculture and alternative management of reclaimed properties, which will ultimately enhance synergy among KSU faculty and staff, local government, agencies, stakeholders, and local communities.